AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A monitoring system comprising:

a cluster of application servers communicatively coupled on a network to serve applications over the network to a plurality of clients, each of the application servers comprising a plurality of server nodes;

a plurality of management bean ("MBean") servers associated with the server nodes of the application servers, the MBean servers comprising ~~a plurality of~~ monitor MBeans generated by a monitor service;

~~a plurality of runtime~~ resource MBeans associated with ~~specified~~ resources on each of the server nodes, each ~~runtime~~ resource MBean registered with at least one of the ~~individual~~ MBean servers ~~and mapped to at least one of the monitor MBeans~~, each of the ~~runtime~~ resource MBeans collecting and reporting monitoring data for its associated resource, wherein the monitor MBeans are installed by a central monitor service based on monitor configuration data at a central database to arrange the monitor MBeans in a hierarchical monitor tree to provide a logical relationship between each of the resources on the server nodes, wherein the resource MBeans are mapped to the monitor MBeans within the monitor tree to establish a link between each of the monitor MBeans and its associated resource; and

notification logic to generate notification in response to certain specified events associated with certain resources of certain MBeans, the notification logic distributing the notifications across all, or a subset of, the server nodes of the cluster.

2. (Original) The system as in claim 1 wherein each server node

is assigned a dedicated MBean server.

3. (Original) The system as in claim 1 further comprising:

a dispatcher node configured within each application server to distribute client requests to each of the server nodes, the dispatcher having a dedicated MBean server associated therewith to monitor resources within the dispatcher,

wherein MBeans associated with the resources generate notifications via the notification logic in response to specified events.

4. (Original) The system as in claim 1 wherein one of the specified events comprises a value associated with a resource reaching a first threshold value.

5. (Original) The system as in claim 4 wherein one of the specified events comprises the value associated with the resource reaching a second threshold value, the second threshold value representing a critical resource value.

6. (Original) The system as in claim l wherein one of the specified events comprises a resource becoming unavailable.

7. (Original) The system as in claim 1 further comprising: a graphical visual administration interface configured to generate graphical images representing the notification.

8. (Original) The system as in claim 1 wherein the application servers comprise Java enterprise servers and wherein the notification logic comprises a notification service executed on one or more of the Java enterprise servers.

9. (Original) The system as in claim 1 wherein each MBean reports MBean notifications to the notification logic through its respective MBean server.

10. (Original) The system as in claim 1 further comprising: a central database to store monitor configuration data defining the resources to be monitored and the events to generate the notifications.

11. (Original) The system as in claim 1 further comprising: a connector associated with each MBean server to communicatively couple each MBean server to the notification logic.

12. (Currently Amended) A method comprising:

associating a plurality of management bean ("MBean") servers with a respective plurality of application server nodes, each of the MBean servers comprising ~~a plurality of~~ monitor MBeans generated by a monitor service and having registered therewith ~~a plurality of runtime~~ resource MBeans, wherein each of the ~~runtime~~ resource MBeans ~~is mapped to at least one of the monitor MBeans~~, the application server nodes together forming a cluster of application servers to serve applications over a network to a plurality of clients;

associating the ~~plurality of runtime~~ resource MBeans with a plurality of respective server node resources, each of the ~~runtime~~ resource MBeans collecting and reporting monitoring data for its associated server node resource, wherein the monitor MBeans are installed by a central monitor service based on monitor configuration data at a central database to arrange the monitor MBeans in a hierarchical monitor tree to provide a logical relationship between each of the resources on the server nodes, wherein the

resource MBeans are mapped to the monitor MBeans within the monitor tree to establish a link between each of the monitor MBeans and its associated resource; and

generating notification in response to certain specified events associated with certain resources of certain MBeans, the notification being distributed across all, or a subset of, the server nodes of the cluster.

13. (Currently Amended) The method as in claim 12 further comprising: assigning each server node ~~it's~~ its own dedicated MBean server.

14. (Currently Amended) The method as in claim 12 wherein each application server comprises a plurality of server nodes and at least one dispatcher, the method further comprising:

associating an MBean server with each dispatcher, each of the MBean servers having registered therewith ~~a plurality of runtime~~ the resource MBeans;

associating the ~~plurality of runtime~~ resource MBeans with a plurality of respective dispatcher resources, each of the ~~runtime~~ resource MBeans collecting and reporting monitoring data for its associated dispatcher resource;

generating notification in response to certain specified events associated with certain dispatcher resources of certain MBeans, the notifications being distributed across all, or a subset of, the server nodes and dispatchers of the cluster.

15. (Original) The method as in claim 12 wherein one of the specified events comprises a value associated with a resource reaching a first threshold value.

16. (Currently Amended) The ~~system~~ method as in claim 15 wherein one of the specified events comprises the value associated with the resource reaching a second threshold value, the second threshold value representing a critical resource value.

17. (Currently Amended) The ~~system~~ method as in claim 12 wherein one of the specified events comprises a resource becoming unavailable.

18. (Original) The method as in claim 12 further comprising:

a graphical visual administration interface configured to generate graphical images representing the notification.

19. (Original) The method as in claim 12 wherein the application servers comprise Java enterprise servers and wherein the notification is generated by a notification service executed on one or more of the Java enterprise servers.

20. (Original) The method as in claim 12 wherein each MBean reports MBean notifications through its respective MBean server.

21 (Original) The method as in claim 12 further comprising:

storing monitor configuration data defining the resources to be monitored and the events to generate the notifications.

22 (Currently Amended) An article of manufacture including program code which, when executed by a machine, causes the machine to perform the operations of:

associating a plurality of management bean ("MBean") servers with a respective plurality of application server nodes, each of the MBean servers

compromising ~~a plurality of~~ monitor MBeans generated by a monitor service and having registered therewith ~~a plurality of runtime~~ resource MBeans~~, wherein each of the runtime MBeans is mapped to at least one of the monitor MBeans~~, the application server nodes together forming a cluster of application servers to serve applications over a network to a plurality of clients;

associating the ~~plurality of runtime~~ resource MBeans with a plurality of respective server node resources, each of the ~~runtime~~ resource MBeans collecting and reporting monitoring data for its associated server node resource, wherein the monitor MBeans are installed by a central monitor service based on monitor configuration data at a central database to arrange the monitor MBeans in a hierarchical monitor tree to provide a logical relationship between each of the resources on the server nodes, wherein the resource MBeans are mapped to the monitor MBeans within the monitor tree to establish a link between each of the monitor MBeans and its associated resource; and

generating notification in response to certain specified events associated with certain resources of certain MBeans, the notification being distributed across all, or a subset of, the server nodes of the cluster.

23. (Original) The article of manufacture as in claim 22 comprising additional program code to cause the machine to assign each server node its own dedicated MBean server.

24. (Currently Amended) The article of manufacture as in claim 22 wherein each application server comprises a plurality of server nodes and at least one dispatcher, the article of manufacture comprising additional program

code to cause the machine to perform the operations of:

associating an MBean server with each dispatcher, each of the MBean servers having registered therewith ~~a plurality of runtime~~ the resource MBeans;

associating the ~~plurality of runtime~~ resource MBeans with a plurality of respective dispatcher resources, each of the ~~runtime~~ resource MBeans collecting and reporting monitoring data for its associated dispatcher resource;

generating notification in response to certain specified events associated with certain dispatcher resources of certain MBeans, the notifications being distributed across all, or a subset of, the server nodes and dispatchers of the cluster.

25. (Original) The article of manufacture as in claim 22 wherein one of the specified events comprises a value associated with a resource reaching a first threshold value.

26. (Currently Amended) The article of manufacture ~~system~~ as in claim 25 wherein one of the specified events comprises the value associated with the resource reaching a second threshold value, the second threshold value representing a critical resource value.

27. (Currently Amended) The article of manufacture ~~system~~ as in claim 22 wherein one of the specified events comprises a resource becoming unavailable.

28. (Original) The article of manufacture as in claim 22 further comprising: a graphical visual administration interface configured to generate graphical images representing the cluster-wide notifications.

29. (Original) The article of manufacture as in claim 22 wherein the application servers comprise Java enterprise servers and wherein the notification is generated by a notification service executed on one or more of the Java enterprise servers.

30. (Original) The article of manufacture as in claim 22 wherein each MBean reports MBean notifications through its respective MBean server.

31. (Original) The article of manufacture as in claim 22 comprising additional program code to cause the machine to perform the operations of:

storing monitor configuration data defining the resources to be monitored and the events to generate the notifications.